October 5, 2018

Texas Commission on Environmental Quality
Air Quality Division
Implementation Grants Section, MC-204
P.O. Box 13087
Austin, TX 78711-3087

ATTN: VW Settlement

RE: COMMENTS ON TEXAS' DRAFT MITIGATION PLAN (VOLKSWAGEN MITIGATION FUND)

I. INTRODUCTION

Environmental Defense Fund (EDF) appreciates the opportunity to provide comments to the Texas Commission on Environmental Quality (TCEQ) on its draft mitigation plan for projects to be funded by the Volkswagen (VW) Environmental Mitigation Trust (EMT). EDF is a non-profit, non-partisan, non-governmental environmental organization that combines law, policy, science, and economics to find solutions to today's most pressing environmental problems.

II. SELECTION OF PROJECTS

TCEQ is proposing both first-come, first-served and competitive grants. While first-come, first-served grants may allow TCEQ to award grants quickly, they may not fund the projects: 1) with the greatest emissions reductions, 2) with the cleanest available technology that provides long-term benefits for Texas, and 3) that occur in the areas where communities are disproportionately affected by diesel air pollution or otherwise impacted by environmental justice issues. First-come, first-served grants also give an unfair advantage to larger, more sophisticated companies and organizations that can quickly prepare and submit grant applications. Competitive grants, with clearly-stated selection criteria, will ensure that mitigation funds have the greatest benefit in the most-needed areas. Projects should be evaluated using criteria that support the intent of the VW EMT (e.g., NOx emission reductions [annual and over service life of vehicle or equipment], project occurring in environmental justice area, project occurring where past harms occurred, etc.) while also ensuring that Texas benefits from technology advancements in the transportation sector (e.g., prioritizing electric applications where feasible, etc.).

TCEQ is also proposing to use a NOx emission estimate methodology that is similar to what they have used for the Texas Emissions Reduction Plan (TERP), but TCEQ should use more updated and comprehensive emissions calculation methodologies to maximize emission reductions. Other tools provide life-cycle emissions benefits,

while adjusting for real-world emissions control challenges, such as the ongoing issue with low engine temperatures and selective-catalytic reduction (e.g., AFLEET). Other tools also quantify additional emission reductions, like fine particulates (PM2.5), carbon monoxide, hydrocarbons, and greenhouse gases (e.g., AFLEET for onroad vehicles, the EPA's Diesel Emission Quantifier [DEQ] for nonroad and marine).

While NOx reductions are a primary goal, projects that generate both NOx and PM2.5 reductions should receive additional priority because of the well-documented health impacts associated with PM2.5. PM2.5 and its constituents are a detriment to human health because the size of the particles allows deep penetration in the lung including the ability to enter the bloodstream. According to the Global Burden of Disease project which reviewed a large body of scientific research, diseases such as "ischemic heart disease, cerebrovascular disease (ischemic stroke and hemorrhagic stroke), lung cancer, chronic obstructive pulmonary disease (COPD), and lower respiratory infections (LRIs)" are causally associated with ambient PM2.5 exposure[1]. Nitrogen oxides affect the respiratory tract and have been associated with increased emergency room visits and hospitalization for COPD[2]. People of color and low wealth often bear the burden of air pollution and health disparities. Projects should be prioritized to have the greatest public health impacts for Texans.

III. PROPOSED ELIGIBLE MITIGATION ACTIONS

TCEQ has proposed to allocate the $209 million that Texas will receive from the VW Environmental Mitigation Fund for a variety of projects. The following provides specific comments on the funding allocation:

- **Administrative Funding –** EDF appreciates TCEQ's goal to leverage resources in order to keep administrative costs low, not to exceed 4 percent. This will help ensure that more projects are funded, supporting the goals of the EMT. We do not support providing administrative funding from the VW EMT for regional authorities or other third parties to administer funding because fewer clean air projects would be funded.

- **Electric Vehicle Charging -** EDF supports investment in charging infrastructure that will help Texas transition to zero-emission technologies. Where possible and appropriate, we encourage deployment of charging infrastructure that can also support medium- and heavy-duty zero emission technologies for even greater benefits. We also support conducting a comprehensive analysis to inform placement of that infrastructure to maximize its effectiveness and avoid duplicating efforts (e.g., close coordination with Electrify America and other initiatives).

- **Class 8 Local Freight Trucks & Port Drayage Trucks -** Drayage trucks operating at ports, such as Port Houston and other Texas ports, are often some of the oldest and most polluting trucks on the road[3]. At many ports throughout the country, clean truck programs that incentivize truck owners (especially independent owner operators) to scrap their older trucks and replace them with cleaner-emitting, newer models—including electric vehicles when they are available—have and will help reduce port-related emissions from a sector that often transits through communities. EDF is supportive of this proposed use of the EMT and encourages TCEQ to the prioritize projects for funding that also propose to install fleet

[1] Health Effects Institute. 2017. State of Global Air 2017. Special Report. Boston, MA: Health Effects Institute.
[2] DeVries, R, *et al*. Outdoor Air Pollution and COPD-Related Emergency Department Visits, Hospital Admissions, and Mortality: A Meta-Analysis. COPD: Journal of Chronic Obstructive Pulmonary Disease, 2017. 14: 113-121.
[3] https://www.edf.org/sites/default/files/content/transportation_research_part_d.pdf

telematics units (and anonymize the data) on the trucks (from another funding source) that would help stakeholders understand how freight and drayage trucks are operating beyond port authority property.

- **Class 7 & 8 Refuse Vehicles.** Refuse haulers transit through communities and neighborhoods, moving slowly as they service their routes. The high emissions, poor fuel economy, and noise issues associated with refuse collection makes these vehicles good candidates for electrification or plug-in hybrid technology. In calculating emission benefits, TCEQ should allow these vehicles to use either a fuel-based or a mileage-based emissions calculation methodology, since vehicles may use power take-off (PTO) or have significant idling. EDF is supportive of this proposed use of the EMT and encourages TCEQ to the prioritize projects for funding that also propose to install fleet telematics units (and anonymize the data) on the trucks (from another funding source) that would help stakeholders understand how refuse haulers are operating in and around neighborhoods. Given the short service life of these vehicles, we would recommend against using VW funds to replace existing vehicles with diesel powered vehicles.

- **Buses (School, Transit, and Shuttle).** Texas should ensure that other available funding continues to be leveraged, such as Federal Transit Administration (FTA) grants, to help make VW funds go as far as possible. TCEQ should consider the potential emission reductions (i.e., prioritize high usage, high gross-vehicle-weight-rating vehicles over lower usage, smaller vehicles), as well as other factors such as community impacts and environmental justice when selecting projects for funding. For example, older school buses can be particularly dangerous for schoolchildren because of a variety of factors, ranging from increased respiration rates for children and open crankcases that allow exhaust gases to enter the interior of the bus; replacing the oldest buses can provide important health benefits for Texas schoolchildren[4].

- **Electric Forklifts & Port Cargo-Handling Equipment.** EDF supports TCEQ's plan to allow port electrification projects for cargo-handling equipment (CHE), especially in the highest usage and horsepower categories. Port Houston and marine terminal operations along the Houston Ship Channel to Port Freeport all support goods movement activities relying on diesel CHE that could reduce emissions through replacement or repower to zero-emission technologies. Railyard facilities (and their fenceline communities) in metropolitan areas in Texas would also benefit greatly from electrification.

- **Electric Airport Ground Support Equipment.** EDF supports TCEQ's plan to allow airport electrification projects for ground support equipment (GSE), especially in the highest usage and horsepower categories.

- **Ocean-going Vessel Shorepower.** Shorepower is an effective emission reduction technology for vessels that call frequently at a port, such as cruise ships or containerships and RO-ROs on designated routes. The US EPA cited a study in its 2017 Shorepower Technology Assessment that estimated emission reductions from cruise ships at the Port of Charleston at up to 98% for NOx, 66% for PM2.5, and 92% for carbon monoxide[5]. As Galveston has indicated plans to add another cruise terminal, and since these vessels contribute significant emissions to the Houston-Galveston-Brazoria airshed (over

[4] https://www.edf.org/sites/default/files/cleanbuses_14_screen.pdf
[5] https://www.epa.gov/sites/production/files/2017-05/documents/420r17004-2017-update.pdf

300 tons of NOx annually for 258 total calls in 2017)[6], it is imperative to address emissions from these vessels. EDF supports TCEQ's plan to reduce emissions from ships which can be especially challenging to address.

- **Tugs/Ferries & Switcher Locomotives.** A recent study[7] highlighted the cost-effectiveness of tug/ferry and switcher locomotive projects. These projects can be very cost-effective because: 1) engines can be decades old (e.g., some tug projects that received funding from TERP demonstrate that these engines can be 50 years or older, with uncontrolled emissions), and 2) tug engines are typically rebuilt to original emissions standards (typically Tier 0 or 1) and do not come out of service unless there has been a catastrophic engine failure. Cleaner Tier 3 and 4 diesel engines, hybrid/electric, and even fully-electric options are now available for marine engine repowers. TCEQ is missing an opportunity by excluding these projects from the list of eligible projects under the VW EMT. Although TCEQ argues that they can be funded under TERP, the agency has often limited the allowable cost per ton (to prioritize projects from other sources, such as the onroad or nonroad sector) or excluded these projects altogether from funding in TERP rounds. EDF strongly encourages TCEQ to include tug/ferry and switcher locomotive projects in the eligible project list for Texas' EMT funding plan.

IV. OTHER COMMENTS

- **Priority Areas.** TCEQ's approach to allocating funds amongst Texas' metropolitan areas should be reconsidered. EDF questions the TCEQ's proposal to allocate ***mitigation*** funding intended as relief from intentional past harms in a manner that does not follow where the damage from vehicle emissions occurred or where the vehicles had been registered. This approach certainly does not follow a common-sense, fair-share approach to distribution of funds. Notably, the state allocations from the original $2.7 billion were allocated based upon vehicle registrations (e.g., *"Each participating beneficiary will receive a specific allocation of funds from the total $2.7 billion that can be used for any of the listed eligible mitigation actions. The allocation structure is primarily based on the number of registered illegal Volkswagen vehicles within the boundaries of the beneficiary. Therefore, those beneficiaries with more illegal 2.0 liter cars will receive a larger allocation of trust funds.[8]"*). Funding should be allocated to regions in a fair-share manner, so that areas that were impacted by high emitting vehicles can mitigate for those impacts.

- **TCEQ should update the plan for spending DERA State funding and accept funding from EPA**. Funding from the EPA DERA State program has traditionally been used for the Texas Clean School Bus Program, focusing on emissions control devices that reduce emissions at the tailpipe. Over the years, interest in using these devices has decreased. By updating the state plan for spending State DERA funds, TCEQ could better address sources not being adequately addressed in existing incentive programs, such as ocean-going vessels, switcher locomotives, and marine engines. Notably, EPA has shared that they are evaluating the potential DERA eligibility for technologies that are alternatives to vessel shorepower, such as the stack bonnet technologies (e.g., Advanced Emissions Control, Advanced Maritime Emissions Control Systems) that have had promising pilots and are now being used in southern

[6] EDF, 2017 cruise calls to Galveston. Estimate based on 8-hour average hoteling duration by six vessels (Carnival Breeze, Carnival Freedom, Carnival Valor, Royal Caribbean Liberty of the Seas, Disney Wonder, and Amadea).
[7] https://www.dieselforum.org/files/dmfile/Cost-Effectiveness_Memo-Task-1-Final-February-2018.pdf
[8] https://www.epa.gov/enforcement/volkswagen-clean-air-act-civil-settlement

California. By re-establishing a Texas program to receive EPA State DERA funds, TCEQ would also be able to take advantage of the VW "DERA Option", which would allow the state to use VW funding for match (and overmatch) and potentially fund projects that are not in the current VW EMT eligible project category list (but are eligible under DERA).

- **TCEQ should issue a broad call for clean air projects, working to align projects with funding beyond VW**. The VW EMT offers an important funding opportunity to address sources of NOx pollution in the eligible project list and has received significant attention in the media. However, a number of worthy emission reduction projects in Texas may not be eligible under VW, or they may be better suited for other funding opportunities. EDF recommends that TCEQ include an option for interested parties to submit their project ideas to TCEQ for evaluation on other funding sources (or for TCEQ to work collaboratively with regional councils on potential project funding sources).

- **Work closely with local regional planning organizations to select projects.** Local councils of governments, metropolitan transportation organizations, and regional councils have invested significant resources into developing State Implementation Plans, regional transportation plans, and air quality planning. In most cases, these organizations also administer similar funding programs (e.g., Congestion Mitigation and Air Quality funding) that could be leveraged, they lead US Department of Energy Clean Cities Coalitions, and they maintain relationships with public and private fleets. In addition, there are at least two group purchasing initiatives that could be leveraged to provide Texas volume discounts or bid development/allowable purchase coordination (i.e., HGACBuy and NCTCOG's Fleets for the Future participation). TCEQ should work closely with these organizations, and if the organization has organizational capacity and resources to do so, TCEQ could consider allowing VW funds to be distributed on a regional basis. EDF does not support using VW funding to provide administrative support to these organizations for that purpose, however, since those funds could be used for clean air projects.

- **Allow projects to request less than the maximum allowable cost reimbursement (and base cost-effectiveness on grant amount request).** TCEQ should allow projects to request grants from the VW EMT that are less than the total cost, and this requested amount should be used when TCEQ determines cost-effectiveness of the project (i.e., not the entire cost). TCEQ appears to favor this approach, based on the example NOx reductions table provided on page 44 of the draft plan. This allows projects to leverage other funding sources, making the $209M able to fund more clean air projects. This also allows applications to improve cost-effectiveness of a project to make it them more competitive with other projects.

- **Allow 2-for-1 projects that could provide even greater emission reduction benefits.** For example, a city fleet may scrap two older refuse trucks in return for purchasing a new, all-electric refuse truck with VW funding. Removing as many pieces of legacy older equipment and vehicles (that have been operating in Texas) from service, as well as from the secondary market, helps realize the most significant emission reductions.

- **Use TERP scrappage requirements.** TCEQ proposes to require grantees to scrap their old vehicles and equipment before submitting reimbursement requests. This requirement differs from TERP, which requires grantees to scrap their old vehicles and equipment within 90 days of receiving their

reimbursement, which protects grantees from possible administrative error and avoids permanent destruction until the project has actually completed.

- **Funding for public fleets.** Public agencies should be required to provide some cost-share for all VW funded projects, to demonstrate their commitment to the project. TCEQ's proposal that the cost-share be as high as forty percent, however, makes it difficult for these fleets to be able to secure the required cost-share in their budgets. As many public fleets have at least some experience with TERP, EDF supports a reimbursement maximum for public fleets of 80%, consistent with TERP. In addition, EDF supports a multi-year rollout of funds to allow fleets—public and private—to plan and budget for cost-share needs that would allow them to turnover their fleets.

V. CONCLUSION

EDF appreciates the opportunity to provide comments to TCEQ on the proposed plan for spending Texas' VW Environmental Mitigation funds. EDF also plans to review all projects funded under the VW Settlement and compile a report to help Texans understand how their funds were expended, what emissions benefits were realized, and how their projects compare with other states. This funding provides a unique opportunity that can be used to meet public health emission reduction goals, while advancing the state of clean technology. If you have any questions, please contact Chris Wolfe at

Sincerely,

Chris Wolfe
Manager, Air Quality, Port and Freight Facilities